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INITIAL		NUMB		DATE	NAME	CLASS		FILING DATE				
KN_	AA1		305,004	04/1994	Fattaruso, John W.	341	120					
KN	AB1		404,142	04/1995	Adams et al.	341	144					
KN	AC1		124,813	09/2000	Robertson et al.	341	143					
KN	AD1		570,521	05/2003	Schofield, William G. J.	341	144					
KN	AE1	US-6,	577,261	06/2003	Brooks et al.	341	144					
KN	AF1	US-6,	614,377	09/2003	Adams et al.	341	144					
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KN	AR	1	Adams, R Scramblin	Adams, R. et al., "A 113-dB SNR Oversampling DAC with Segmented Noise-Shaped Scrambling," IEEE Journal of Solid-State Circuits 33:12:1879-1886 (December 1998)								
ķΝ	AS	1	Annovazzi, M. et al., "A Low-Power 98-dB Multibit Audio DAC in a Standard 3.3-V 0.35-µm CMOS Technology," IEEE Journal of Solid-State Circuits 37:7:825-834 (July 2002)									
. KH	AT	1 5	Baird, R. a	aird, R. and Fiez, T., "Improved ΔΣ DAC Linearity Using Data Weighted Averaging," <i>IEEE</i> , p. 13-16 (1995)								
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FORM PTO-1449 INFORMATION DISCLOSURE STATEMENT

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KN	AR	2	Chen, F. an	d Leuna, B., "S	Some Observations on 998 International Symp	Tone Behavior i	n Data \	Weighted Ave System, I-500	raging," through I-503			
kΝ	AS	2	Modulators	Chen, K. and Kuo, T., "An Improved Technique for Reducing Baseband Tones in Sigma-Delta Modulators Employing Data Weighted Averaging Algorithm Without Adding Dither," IEEE Transactions on Circuits and Systems- II: Analog and Digital Signal Processing 46:1:63-68 (January 1999)								
KN	AT	2	Fishov, A. e (2002)	t al., "Segment	ed Mismatch-Shaping	D/A Conversion	," IEEE,	, pp. IV-679 th	rough IV-682			
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ΚŊ	AR	<u>3</u>	Digital Co	Folgeman, E. and Galton, I., "A Digital Common-Mode Rejection Technique for Differential Analog-to- Digital Conversion," <i>IEEE Transactions on Circuits and Systems-II: Analog and Digital Signal</i> Processing 48:3:255-271 (March 2001)								
κN	AS	<u>3</u>	Galton, I., Circuits ar	Salton, I., "Spectral Shaping of Circuit Errors in Digital-to-Analog Converters," <i>IEEE Transactions on Circuits and System-II: Analog and Digital Signal Processing</i> 44:10:808-817 (October 1997)								
KN	AT	3	Grilo, J. et Single-Chi	al., "A 12-mW A	DC Delta-Sig	ma Modulator With E Journal of Solid-	80dB of D State Circu)ynam uits 37	nic Range In ':3:271-278 (tegrated in a (March 2002)		
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KN'	AR	Jensen, 4 Synthesi	H. and Galton, I.,	"A Low-Complexity Dynamitions on Circuits and System	ic Element Match	ing DAC for Dire	ect Digital Processing,			
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KN	AT	4 Norswort	hy, S.R. et al., ed rs: Theory, Desig	s., "Practical Measures for In and Simulation, IEEE Pre	Preventing Idle Tess, pp. 185-186 (ones" in <i>Delta-S</i> (1997)	Sigma Data			
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KN	AS	<u>5</u>	Radke, R. (Radke, R. et al., "A 14-Bit Current-Mode ΣΔ DAC Based Upon Rotated Data Weighted Averaging," IEEE Journal of Solid-State Circuits 35:8:1074-1084 (August 2000)								
KN	AT	<u>5</u>	Modulators Transaction	adipour, M., "Techniques for Preventing Tonal Behavior of Data Weighted Averaging Algorithm in Σ-Δ lodulators," IEEE Transactions on Circuits and Systems- II: Analog and Digital Signal Processing, ransactions on Circuits and Systems- II: Analog and Digital Signal Processing 47:11:1137-1144 November 2000)								
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KN	AS	<u>6</u>	Welz, J. ar	Welz, J. and Galton, I., "A Necessary and Sufficient Condition for Mismatch Shaping in Multi-bit DACS," IEEE, pp. I-105 through 108 (2002)								
EN	AT	<u>6</u>	Yasuda, A Matching,"	et al., "A Thir IEEE Journal	d-Orde	er Δ-Σ Modulator Usin id-State Circuits 33:12	ng Seco 2:1879-	nd-Order N 1886 (Dece	loise Shaping D ember 1998)	ynamic Element		
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